REMARKS/ARGUMENTS

Reconsideration of the application is requested.

Claims 1 and 3, 4, 6, 7, and 9 remain in the application. Claims 1, 3, 4, 6, 7, and 9 have been amended. Claims 2, 5, and 8 have been canceled.

Claim 1 now includes the features of original claims 1 and 2. Claim 4 now includes the features of original claims 4 and 5, and claim 7 now includes the features of original claims 7 and 8. Consequently, claims 2, 5, and 8 have been canceled.

In item 2 on page 2 of the above-identified Office Action, claims 1, 4, and 7 have been rejected as being anticipated by Durham et al. (U.S. 5, 761,517) (hereinafter "Durham") under 35 U.S.C. § 102(b).

The rejection has been noted and the claims have been amended in an effort to even more clearly define the invention of the instant application. Support for the changes is found in the original claims of the instant application.

Before discussing the prior art in detail, it is believed that a brief review of the invention as claimed, would be helpful.

Claim 1 calls for, *inter alia*, a frequency regulating circuit for the current-consumption-dependent clock supply of a circuit configuration, having:

a current measuring device for measuring an instantaneous current consumption of the circuit configuration;

means for comparing the instantaneous current measured by the current measuring device with a definable threshold value;

a controllable clock supply circuit having:

an output to be connected to a clock input of the circuit configuration; and

a clock generator generating a clock signal with clock pulses at the output; and

a control device connected to the clock supply circuit and driving the clock supply circuit based upon the measured current consumption, **the control device controlling said clock supply circuit to filter out individual clock pulses of the clock signal and reduce a clock frequency at the output of the clock supply circuit when the means for comparing determine**

that the instantaneous current consumption exceeds the definable threshold value. (emphasis added)

Durham shows a system and method, which automatically change the output of an oscillator clock prior to its input to dynamic logic circuit elements as a system clock signal. The output oscillator clock signal is controlled based on a signal generated by a sensor, which determines the power consumption of the integrated circuit. The frequency clock signal is reduced or increased incrementally based upon the output of the sensor, which detects the level of specific circuit characteristic, relating to electrical power consumption. A pattern generator is used to input a digital signal to a series of interconnect registers which make up a loadable shift register. The output of the pattern generator is based upon the input from the sensor. The bits shifted through the shift register are ANDed with the oscillator clock signal to control the frequency of the system clock.

Durham does not disclose a current measuring device for measuring an instantaneous current consumption as recited in the claims of the subject application. Nor does Durham disclose a frequency regulating circuit comprising means for comparing an instantaneous current measured by a current measuring device with a definable threshold value as set forth

in the claims of the subject application. Additionally, Durham does not disclose a clock supply circuit to filter out individual clock pulses as recited in the claims..

In view of the foregoing, Durham does not anticipate claim 1, 4, or 7.

An important difference between the present invention and the system for automatically changing the output of an oscillator as described in Durham is that the present invention measures an instantaneous current consumption and, in response to the measured instantaneous current consumption, filters out individual clock pulses when the means for comparing determines that instantaneous current consumption exceeds a definable threshold value. This is recited in the claims of the subject application.

Lines 2-7 of page 5 of the specification of the instant application describes that this ensures that the circuit configuration always operates with the maximum power that is possible taking account of the permissible maximum value for the current consumption. Thus, the maximum possible power is always available, without the circuit configuration being endangered by excessively great heating.

In contrast, Durham's disclosed system uses a series of interconnected registers, which make up a load able shift register. As is apparent in Durham from Fig. 4 and the description in col. 2, lines 9-17 of, the pattern generator issues a different sequence of bits which causes the shift register to incrementally reduce the system clock by a predetermined percentage, such as 25% to reach a clock frequency of 50% of oscillator frequency. Consequently, the series of interconnected registers effectively act as a frequency divider. By providing a circuit that effectively acts as a frequency divider, it cannot be ensured that the circuit configuration always operates with the maximum power that is possible.

For example, operations requiring to reduce the system clock to 90% of the maximum system clock requires that every tenth pulse of a system clock signal is filtered out. This, however cannot be achieved with the arrangement disclosed in Durham, because at least one in four pulses is filtered out in accordance with the system disclosed in Durham, reducing the system clock to 75%. Although, as described in column 3, lines 59-63, longer bit patterns can be used to refine the step width, the circuit disclosed in Durham always removes a fixed percentage of clock pulses having a fixed relationship to one another, e.g. every fourth clock pulse, but does not

filter out individual clock pulses as recited in claim 1 of the instant application.

At the same time, the adjustment of the operating frequency is not determined instantaneously, but during a predetermined sampling period (se column 4, lines 40-41 of Durham). Thus, the clock frequency is determined in response to an average sensor value, but not the instantaneous current consumption as recited in claim 1 of the instant application.

Independent claims 4 and 7 also set forth a frequency regulating circuit having a current measuring device for measuring an instantaneous current consumption of a circuit configuration, means for comparing the instantaneous current measured by the current measuring device with a definable threshold value, and a controllable clock supply circuit, wherein individual clock pulses are filtered out when the means for comparing determines that instantaneous current consumption exceeds the definable threshold value.

Consequently, the subject matter of independent claims 4 and 7 is neither anticipated by Durham nor obvious over Durham in view of Wang as discussed below.

In item 4 on page 2 of the above-identified Office Action, claims 2, 3, 5, 6, 8, and 9 have been rejected as being unpatentable over Durham and Wang (U.S. 5,943,203) under 35 U.S.C. § 103(a).

The foregoing discussion of Durham applies equally for to this rejection.

Wang shows refers to an electronic circuit breaker. The circuit breaker according to Wang has a comparator for comparing a current through a controllable impedance sensed by a current sensor with a threshold level. However, Wang does not disclose a frequency regulating circuit, nor does Wang disclose a filtering out of individual clock pulses of a maximum system clock signal in response to a measured current as recited in claims 1, 4, and 7 of the instant application.

Applicants submit that a person of ordinary skill in the art of frequency regulation would not have considered Wang for combination with Durham or with respect to the present claimed invention, because Wang relates to a completely different area of technology. Even if one would have considered Wang for combination with Durham, the claimed invention would not have resulted because neither Durham nor Wang discloses a frequency regulating circuit to filter out individual clock pulses in

response to a measured instantaneous current consumption of a circuit configuration as recited in the claims of the subject application.

Wang does not make up for the deficiencies of Durham.

The references do not show "a current measuring device for measuring an instantaneous current consumption of the circuit configuration; means for comparing the instantaneous current measured by said current measuring device with a definable threshold value; and "said control device controlling said clock supply circuit to filter out individual clock pulses of said clock signal and reduce a clock frequency at said output of said clock supply circuit when said means for comparing determine that the instantaneous current consumption exceeds the definable threshold value", as recited in claim 1 of the instant application. Claims 4 and 7 have similar limitations.

It is accordingly believed to be clear that none of the references, whether taken alone or in any combination, either show or suggest the features of claims 1, 4, or 7. Claims 1, 4, and 7 are, therefore, believed to be patentable over the art. The dependent claims are believed to be patentable as well because they all are ultimately dependent on claim 1, 4, or 7.

In view of the foregoing, reconsideration and allowance of claims 1, 3, 4, 6, 7, and 9 are solicited.

In the event the Examiner should still find any of the claims to be unpatentable, counsel would appreciate receiving a telephone call so that, if possible, patentable language can be worked out.

If an extension of time for this document is required, petition for extension is herewith made.

Please charge any other fees that might be due with respect to Sections 1.16 and 1.17 to the Deposit Account of Lerner and Greenberg, P.A., No. 12-1099.

Respectfully submitted,

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FDP/bb

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